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Sequence Listing was accepted.

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217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2008; month=10; day=15; hr=12; min=16; sec=2; ms=256; ]

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Application No: 10520026 Version No: 1.0

**Input Set:****Output Set:**

**Started:** 2008-10-14 13:13:06.739  
**Finished:** 2008-10-14 13:13:10.250  
**Elapsed:** 0 hr(s) 0 min(s) 3 sec(s) 511 ms  
**Total Warnings:** 137  
**Total Errors:** 0  
**No. of SeqIDs Defined:** 137  
**Actual SeqID Count:** 137

Error code	Error Description
W 402	Undefined organism found in <213> in SEQ ID (1)
W 402	Undefined organism found in <213> in SEQ ID (2)
W 402	Undefined organism found in <213> in SEQ ID (3)
W 402	Undefined organism found in <213> in SEQ ID (4)
W 402	Undefined organism found in <213> in SEQ ID (5)
W 402	Undefined organism found in <213> in SEQ ID (6)
W 402	Undefined organism found in <213> in SEQ ID (7)
W 402	Undefined organism found in <213> in SEQ ID (8)
W 402	Undefined organism found in <213> in SEQ ID (9)
W 402	Undefined organism found in <213> in SEQ ID (10)
W 402	Undefined organism found in <213> in SEQ ID (11)
W 402	Undefined organism found in <213> in SEQ ID (12)
W 402	Undefined organism found in <213> in SEQ ID (13)
W 402	Undefined organism found in <213> in SEQ ID (14)
W 402	Undefined organism found in <213> in SEQ ID (15)
W 402	Undefined organism found in <213> in SEQ ID (16)
W 402	Undefined organism found in <213> in SEQ ID (17)
W 402	Undefined organism found in <213> in SEQ ID (18)
W 402	Undefined organism found in <213> in SEQ ID (19)
W 402	Undefined organism found in <213> in SEQ ID (20)

**Input Set:**

**Output Set:**

**Started:** 2008-10-14 13:13:06.739  
**Finished:** 2008-10-14 13:13:10.250  
**Elapsed:** 0 hr(s) 0 min(s) 3 sec(s) 511 ms  
**Total Warnings:** 137  
**Total Errors:** 0  
**No. of SeqIDs Defined:** 137  
**Actual SeqID Count:** 137

Error code	Error Description
	This error has occurred more than 20 times, will not be displayed
W 213	Artificial or Unknown found in <213> in SEQ ID (29)
W 213	Artificial or Unknown found in <213> in SEQ ID (30)
W 213	Artificial or Unknown found in <213> in SEQ ID (31)
W 213	Artificial or Unknown found in <213> in SEQ ID (32)
W 213	Artificial or Unknown found in <213> in SEQ ID (33)
W 213	Artificial or Unknown found in <213> in SEQ ID (34)

# SEQUENCE LISTING

<110> Zhu, Zhenping

<120> Bispecific Antibodies That Bind to VEGF Receptors

<130> 11245/48503

<140> 10520026

<141> 2008-10-14

<150> PCT/US02/041372

<151> 2002-12-24

<150> PCT/US02/20332

<151> 2002-06-26

<150> US 60/301,299

<151> 2001-06-26

<160> 137

<170> WordPerfect 8.0 for Windows

<210> 1

<211> 10

<212> PRT

<213> Mouse

<400> 1

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<210> 2

<211> 17

<212> PRT

<213> Mouse

<400> 2

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1				5					10					15		

<210> 3

<211> 8

<212> PRT

<213> Mouse

<400> 3

Tyr	Tyr	Gly	Asp	Tyr	Glu	Gly	Tyr
1				5			

<210> 4

<211> 10

<212> PRT  
<213> Mouse

<400> 4

Ser Ala Ser Ser Ser Val Ser Tyr Met His  
1 5 10

<210> 5

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<212> PRT

<213> Mouse

<400> 5

Ser Thr Ser Asn Leu Ala Ser  
1 5

<210> 6

<211> 9

<212> PRT

<213> Mouse

<400> 6

Gln Gln Arg Ser Ser Tyr Pro Phe Thr  
1 5

<210> 7

<211> 117

<212> PRT

<213> Mouse

<400> 7

Gln Val Lys Leu Gln Gln Ser Gly Ala Glu Leu Val Gly Ser Gly Ala  
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20 25 30  
Tyr Met His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile  
35 40 45  
Gly Trp Ile Asp Pro Glu Asn Gly Asp Ser Gly Tyr Ala Pro Lys Phe  
50 55 60  
Gln Gly Lys Ala Thr Met Thr Ala Asp Ser Ser Ser Asn Thr Ala Tyr  
65 70 75 80  
Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys  
85 90 95  
Asn Ala Tyr Tyr Gly Asp Tyr Glu Gly Tyr Trp Gly Gln Gly Thr Thr  
100 105 110  
Val Thr Val Ser Ser  
115

<210> 8

<211> 108

<212> PRT

<213> Mouse

<400> 8

Asp Ile Glu Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly  
 1 5 10 15  
 Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met  
 20 25 30  
 His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Ile Tyr  
 35 40 45  
 Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser  
 50 55 60  
 Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Met Glu Ala Glu  
 65 70 75 80  
 Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr  
 85 90 95  
 Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg Ala  
 100 105

<210> 9

<211> 30

<212> DNA

<213> Mouse

<400> 9

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 1 5 10

<210> 10

<211> 51

<212> DNA

<213> Mouse

<400> 10

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 1 5 10 15  
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<210> 11

<211> 24

<212> DNA

<213> Mouse

<400> 11

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 1 5

<210> 12

<211> 30

<212> DNA

<213> Mouse

<400> 12

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Ser Ala Ser Ser Ser Val Ser Tyr Met His	
1 5 10	
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1 5	
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<213> Mouse	
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1 5	
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1 5 10 15	
tca gtc aaa ttg tcc tgc aca act tct ggc ttc aac att aaa gac ttc	96
Ser Val Lys Leu Ser Cys Thr Thr Ser Gly Phe Asn Ile Lys Asp Phe	
20 25 30	
tat atg cac tgg gtg aag cag agg cct gaa cag ggc ctg gag tgg att	144
Tyr Met His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile	
35 40 45	
gga tgg att gat cct gag aat ggt gat tct ggt tat gcc ccg aag ttc	192
Gly Trp Ile Asp Pro Glu Asn Gly Asp Ser Gly Tyr Ala Pro Lys Phe	
50 55 60	
cag ggc aag gcc acc atg act gca gac tca tcc tcc aac aca gcc tac	240
Gln Gly Lys Ala Thr Met Thr Ala Asp Ser Ser Ser Asn Thr Ala Tyr	
65 70 75 80	
ctg cag ctc agc agc ctg aca tct gag gac act gcc gtc tat tac tgt	288
Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys	
85 90 95	
aat gca tac tat ggt gac tac gaa ggc tac tgg ggc caa ggg acc acg	336
Asn Ala Tyr Tyr Gly Asp Tyr Glu Gly Tyr Trp Gly Gln Gly Thr Thr	
100 105 110	
gtc acc gtc tcc tca	351
Val Thr Val Ser Ser	
115	

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<212> DNA  
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<400> 16

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  1             5             10             15
gag aag gtc acc ata acc tgc agt gcc agc tca agt gta agt tac atg      96
Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
             20             25             30
cac tgg ttc cag cag aag cca ggc act tct ccc aaa ctc tgg att tat     144
His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Ile Tyr
             35             40             45
agc aca tcc aac ctg gct tct gga gtc cct gct cgc ttc agt ggc agt     192
Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
             50             55             60
gga tct ggg acc tct tac tct ctc aca atc agc cga atg gag gct gaa     240
Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Met Glu Ala Glu
             65             70             75             80
gat gct gcc act tat tac tgc cag caa agg agt agt tac cca ttc acg     288
Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr
             85             90             95
ttc ggc tcg ggg acc aag ctg gaa ata aaa cgg gcg                      324
Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg Ala
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<210> 17  
<211> 15  
<212> PRT  
<213> Mouse

<400> 17

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Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
  1             5             10             15
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<210> 18  
<211> 45  
<212> DNA  
<213> Mouse

<400> 18

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ggcggaggcg gttcaggcgg aggtggctct ggcgggtggcg gatcg      45
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<210> 19  
<211> 10  
<212> PRT  
<213> Mouse

<400> 19

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Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
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1                    5                    10  
  
 <210> 20  
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 <212> DNA  
 <213> Mouse  
  
 <400> 20  
  
 ggtggaggcg gttca                    15  
  
 <210> 21  
 <211> 17  
 <212> PRT  
 <213> Mouse  
  
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   1                    5                    10                    15  
  
 <210> 22  
 <211> 117  
 <212> PRT  
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 <400> 22  
  
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 Ser Val Lys Leu Ser Cys Thr Thr Ser Gly Phe Asn Ile Lys Asp Phe  
                   20                    25                    30  
 Tyr Met His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile  
                   35                    40                    45  
 Gly Trp Ile Asp Pro Glu Asn Gly Asp Ser Asp Tyr Ala Pro Lys Phe  
   50                    55                    60  
 Gln Gly Lys Ala Thr Met Thr Ala Asp Ser Ser Ser Asn Thr Ala Tyr  
   65                    70                    75                    80  
 Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys  
                   85                    90                    95  
 Asn Ala Tyr Tyr Gly Asp Tyr Glu Gly Tyr Trp Gly Gln Gly Thr Thr  
                   100                    105                    110  
 Val Thr Val Ser Ser  
                   115  
  
 <210> 23  
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 <212> PRT  
 <213> Mouse  
  
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 Asp Ile Glu Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly  
   1                    5                    10                    15  
 Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met  
                   20                    25                    30

His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Ile Tyr  
           35                          40                          45  
 Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser  
           50                          55                          60  
 Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Met Glu Ala Glu  
           65                          70                          75                          80  
 Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr  
                           85                          90                          95  
 Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys  
                           100                          105

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 <213> Mouse

<400> 24

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 <212> DNA  
 <213> Mouse

<400> 25

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 tca gtc aaa ttg tcc tgc aca act tct ggc ttc aac att aaa gac ttc 96  
 Ser Val Lys Leu Ser Cys Thr Thr Ser Gly Phe Asn Ile Lys Asp Phe  
           20                          25                          30  
 tat atg cac tgg gtg aag cag agg cct gaa cag ggc ctg gag tgg att 144  
 Tyr Met His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile  
           35                          40                          45  
 gga tgg att gat cct gag aat ggt gat tct gat tat gcc ccg aag ttc 192  
 Gly Trp Ile Asp Pro Glu Asn Gly Asp Ser Asp Tyr Ala Pro Lys Phe  
           50                          55                          60  
 cag ggc aag gcc acc atg act gca gac tca tcc tcc aac aca gcc tac 240  
 Gln Gly Lys Ala Thr Met Thr Ala Asp Ser Ser Ser Asn Thr Ala Tyr  
           65                          70                          75                          80  
 ctg cag ctc agc agc ctg aca tct gag gac act gcc gtc tat tac tgt 288  
 Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys  
                           85                          90                          95  
 aat gca tac tat ggt gac tac gaa ggc tac tgg ggc caa ggg acc acg 336  
 Asn Ala Tyr Tyr Gly Asp Tyr Glu Gly Tyr Trp Gly Gln Gly Thr Thr  
           100                          105                          110  
 gtc acc gtc tcc tca 351  
 Val Thr Val Ser Ser  
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<400> 26

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   1             5             10             15
gag aag gtc acc ata acc tgc agt gcc agc tca agt gta agt tac atg      96
Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
           20           25           30
cac tgg ttc cag cag aag cca ggc act tct ccc aaa ctc tgg att tat      144
His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Ile Tyr
           35           40           45
agc aca tcc aac ctg gct tct gga gtc cct gct cgc ttc agt ggc agt      192
Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
           50           55           60
gga tct ggg acc tct tac tct ctc aca atc agc cga atg gag gct gaa      240
Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Met Glu Ala Glu
           65           70           75           80
gat gct gcc act tat tac tgc cag caa agg agt agt tac cca ttc acg      288
Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Phe Thr
           85           90           95
ttc ggc tcg ggg acc aag ctg gaa ata aaa                                318
Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
           100           105
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<210> 27

<211> 240

<212> PRT

<213> Mouse

<400> 27

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           20           25           30
Tyr Met His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile
           35           40           45
Gly Trp Ile Asp Pro Glu Asn Gly Asp Ser Gly Tyr Ala Pro Lys Phe
           50           55           60
Gln Gly Lys Ala Thr Met Thr Ala Asp Ser Ser Asn Thr Ala Tyr
           65           70           75           80
Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
           85           90           95
Asn Ala Tyr Tyr Gly Asp Tyr Glu Gly Tyr Trp Gly Gln Gly Thr Thr
           100           105           110
Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
           115           120           125
Gly Gly Gly Ser Asp Ile Glu Leu Thr Gln Ser Pro Ala Ile Met Ser
           130           135           140
Ala Ser Pro Gly Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser
           145           150           155           160
Val Ser Tyr Met His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys
           165           170           175
Leu Trp Ile Tyr Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg
           180           185           190
Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg
           195           200           205
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Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser  
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 Tyr Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg Ala  
 225 230 235 240

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 <211> 238  
 <212> PRT  
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 Ser Val Lys Leu Ser Cys Thr Thr Ser Gly Phe Asn Ile Lys Asp Phe  
 20 25 30  
 Tyr Met His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile  
 35 40 45  
 Gly Trp Ile Asp Pro Glu Asn Gly Asp Ser Asp Tyr Ala Pro Lys Phe  
 50 55 60  
 Gln Gly Lys Ala Thr Met Thr Ala Asp Ser Ser Ser Asn Thr Ala Tyr  
 65 70 75 80  
 Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys  
 85 90 95  
 Asn Ala Tyr Tyr Gly Asp Tyr Glu Gly Tyr Trp Gly Gln Gly Thr Thr  
 100 105 110  
 Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly  
 115 120 125  
 Gly Gly Gly Ser Asp Ile Glu Leu Thr Gln Ser Pro Ala Ile Met Ser  
 130 135 140  
 Ala Ser Pro Gly Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser  
 145 150 155 160  
 Val Ser Tyr Met His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys  
 165 170 175  
 Leu Trp Ile Tyr Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg  
 180 185 190  
 Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg  
 195 200 205  
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 Tyr Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys  
 225 230 235

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<210> 30  
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<212> DNA

<213> Artificial Sequence

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<223> Synthetic primer

<400> 30

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<210> 31

<211> 52

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic primer

<400> 31

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<210> 32

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Signal

<400> 32

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<210> 33

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> leader peptide

<400> 33

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly

5

10

15

Val His Ser

<210> 34

<211> 32

<212> DNA

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<223> Synthetic primer

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